Original Article

Antibiotic Resistance of the Isolated Bacteria from Blood Cultures of Cancer Patients

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Abstract

Background and Objective: One of the main causes of increased mortality in cancer patients is bacteremia. On the other hand, antibiotic resistance is the major cause of treatment failure in malignant diseases especially in hematological malignancies. The aim of this study was to diagnose the bacterial strains isolated from blood specimens of cancer patients and to determine their antibiotic susceptibility.

Material and Methods: In this cross-sectional study, 0.5 ml of venous blood was taken from 613 cancer patients especially leukemia, and blood cultures and antibiotic susceptibility tests were performed using standard methods. Using disc diffusion method, antibiotic susceptibility was performed with a wide range of antibiotics.

Results: Out of 613 cultured specimens, 153 (25%) were found to be positive including 76.47% of gram negative and 23.53% of gram positive bacteria. The most common isolated bacteria were *E. coli*, coagulase-negative *Staphylococci*, *Klebsiella*, *Staphylococcus aureus* and *Pseudomonas aeroginosa*, respectively.

Conclusion: It seems that Ceftriaxone is the best choice for the treatment of gram negative caused bacteremia and Gentamicin for bacteremia caused by gram positive agents. Given the high level of resistance to the commonly used antibiotics, it seems reasonable to avoid of early and inappropriate use of antibiotics to prevent the development of drug resistant bacteria.

Keywords: Cancer, Blood Cultures, Bacteremia, Antibiotic Resistance

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